




The Lubricator Spokesman

Published by
NATIONAL LUBRICATING GREASE INSTITUTE

VOLUME III

NUMBER 9

DECEMBER, 1939


Wishing You A Very
Merry Christmas
and
A Bright and Prosperous New Year



OFFICERS AND DIRECTORS

President and Treas.: E. V. MONCRIEFF, Swan-Finch Oil Corp.

Vice-Pres.: F. C. KERNS, The Texas Co.

Executive Secretary: G. W. MILLER, Battenfeld Grease & Oil Corp. of N. Y.

DIRECTORS

J. R. BATTENFELD, Battenfeld Grease & Oil Corp.

W. E. CALLAGHAN, Motor State Oil & Grease Co.

J. R. CORBETT, Cato Oil & Grease Co.

C. B. KARNS, Standard Oil Company of N. J.

L. P. LOCHRIDGE, Sinclair Refining Company

Wm. H. OLDACRE, D. A. Stuart & Company

SYDNEY BEVIN, Fiske Bros. Refining Company

B. C. VOSHELL, Socony-Vacuum Oil Co., Inc.

Wm. H. SAUNDERS, Jr., International Lubricant Corp.

R. H. PATCH, E. F. Houghton & Co.

M. R. BOWER, Standard Oil Co., Ohio

M. B. CHITTICK, Pure Oil Company

C. S. LINCOLN, Standard Oil Co., California

The New "SEALED BEAM" Headlamps*

INSTRUCTIONS FOR REMOVING AND INSTALLING THE UNIT—BEAM ADJUSTMENTS

The majority of the new 1940 automobiles are equipped with a new headlighting system known as "Sealed Beam." In fact, the only cars in early production not using this new system are American Bantam, Crosley, Graham and Willys.

For servicing the older types of headlamps, it is necessary to stock numerous types of different candlepower bulbs, gaskets, lenses, reflectors, etc., in order to be equipped for satisfactory service for all cars. With the new Sealed Beam headlamps this is unnecessary. The reflector, light source, lens and gasket are in one securely sealed unit. If the light filament burns out, or if the lens is broken, it necessitates the discarding of the entire unit and the installation of a new unit. Because of far greater filament life and lack of maintenance cost, however, it is expected that the lamp cost per mile will be no greater than with former types. The retail price of the Sealed Beam units is \$1.35.

Although there are a number of lamp makers manufacturing Sealed Beam headlamps, all of these units are interchangeable and any make can be installed on any car. Some details of design differ as between the different lamp makes, but from the standpoint of installation and use they are identical.

Sealed Beam headlamps are made in two types, one with a silver-plated metal reflector and the other with an aluminum-surfaced reflector of glass. The metal type contains a conventional bulb, whereas the glass type is its own bulb, the glass lens and glass reflector being fused together, forming a gas-tight unit within which are placed the filaments. The two types are identical in appearance, however, and provide the same

beam pattern. The same servicing instructions apply to both types and to all makes.

Light switches are the same on all cars having the new system. Parking lights are separate. A knob on the instrument panel is used to switch on either the headlamps or parking lights while a foot switch is used for changing from Traffic Beam to Country Beam or vice versa. When the Country Beam is in use, a red signal light shows on the instrument panel.

Removing and Installing Sealed Beam Unit

To remove the unit, first loosen the screw at the bottom of the door and remove the door by swinging outward from the bottom and lifting upward. There is no possibility of the lens slipping out and breaking because it is an integral part of the unit. Next, loosen (but do not remove) the three screws holding the unit retaining ring, and remove it by turning counter-clockwise until the slotted openings in the ring free themselves from the screw heads. Do not disturb the two beam-aiming screws (one directly on top center of the case, the other on horizontal center on side of the case).

The whole unit can now be brought forward from the case, and the wiring connections can be pulled off, completely detaching the unit.

The new unit can be installed by reversing the operations.

Aiming Sealed-Beam Headlamps

The accurate aiming of the beam has been made very simple and no difficulty should be experienced if the following directions are adhered to.

The removal of the rim uncovers the adjusting screws, one of which controls the up-and-down aim, the other the sideways

aim. The adjusting of the screw directly on top center of the case controls the vertical aim and the screw on horizontal center on side of the case controls the longitudinal or sideways aim.

Place the car on a level floor with a light colored screen or wall 25 ft. ahead of lamps. Draw a horizontal line on this 3 in. below the vertical height of the center of the headlamp lenses from the floor. (This 3 in. dimension may vary in different states where a loading allowance is required). Draw a center vertical line on screen or wall, and then two additional vertical lines at a distance each side of the center vertical line equal to one-half the distance center to center between headlights. In other words, the center vertical line represents the center of the car and the distance between the two outside vertical lines represents the distance between the headlamps.

Place light switch in position for upper or "Country" Beam (bright light), then adjust the beam of each lamp individually by covering the one not being worked on. Adjustment should be such that the area of highest intensity falls at the intersection of the horizontal line and the vertical line directly ahead of the lamp being adjusted. No further adjustment for the lower or "Traffic" Beam is necessary.

The new Sealed-Beam headlamps throw their light a considerably greater distance down the road and give a wider distribution of light above and to the sides of the road than former types. With the new lamps, eye strain and fatigue are greatly reduced and night driving comfort and safety increased. Sealed Beam headlamps are an important contribution to accident prevention.

* Copyright Chek-Chart, Inc. Reproduction forbidden.

Huge Market for Petroleum Products in Farm Tractors

The United States Department of Agriculture recently estimated that the United States 1940 farm income may hit a peak for the last ten years. From figures available at this time, it is estimated that as a result of increased industrial and export demand, the 1940 farm income may be as much as \$700,000,000 above 1939. The 1940 farm purchasing power is also estimated to be above the 1937 level, which was the highest since 1930.

News of this sort is of extreme interest to everyone handling farm implements or having anything to do with the maintenance of them. The farm tractor, which is an outstanding farm implement from the standpoint of its widespread use, is a very large consumer of petroleum products, and is to be the focal point of a new program which will be designed to encourage the farmer to lubricate his tractor regularly and systematically.

This tractor lubrication program, to be released in part in March, 1940, and in its entirety by June, 1940, has been conceived and developed by The Chek-Chart Corp., Chicago, in close co-operation with farm tractor manufacturers and oil company engineers.

The preliminary program to be released in March to satisfy the growing demand for the material, will include approximately 17 lubrication diagrams that will cover close to 75 per cent of eight leading tractor builders' sales of wheel type tractors for farm use.

These diagrams will be produced on indi-

(Continued on page 3)

Material appearing in The Institute Spokesman



The INSTITUTE SPOKESMAN

Published Monthly by THE NATIONAL
LUBRICATING GREASE INSTITUTE

GEORGE W. MILLER . . . Editor
498 Winspear Avenue, Buffalo, N. Y.

(Continued from page 2)

vidual sheets and will carry each oil company's trade-mark and their branded products in the key box, as well as some promotional or advertising copy.

The diagrams will be distributed by oil company representatives, and it is recommended that when the salesman receives an order for tractor lubricants from a farmer, that he tack upon the door of the tractor shelter a lubrication diagram of that farmer's tractor. This will be an individual diagram of the farmer's own tractor, and will show him when, where, and how it should be lubricated. The diagrams will facilitate the oil company's salesman's job of making the proper recommendations for each farmer's requirements.

The diagrams have been developed only after close co-operation between tractor builders, oil companies, and CHEK-CHART engineers, and the charts as produced will be approved by the tractor manufacturers.

The 1,652,654 farm tractors in the United States today represent (figuring conservatively) a market for approximately 2,313,715,600 gallons of tractor fuel, according to CHEK-CHART. Annually, they consume 66,106,160 gallons of motor oil; 231,371,560 pounds of transmission and differential lubricants, and 33,053,080 pounds of chassis lubes and specialized greases.

March is set as the date for the availability of a substantial part of the program, with the complete plan ready in June. CHEK-CHART points out that its tractor lubrication program is very flexible. Further details regarding the plan may be obtained by writing direct to The Chek-Chart Corp., 624 South Michigan Avenue, Chicago.

The sales possibilities of this market are tremendous. There are today approximately 1,652,654 tractors in use in the United States, distributed as follows:

States	Tractors
Alabama	11,005
Arizona	5,307
Arkansas	14,666

(Continued on page 4)

What Car Makers Say*

SERVICING THE FLUID DRIVE AND HYDRA-MATIC TRANSMISSION

Starting with 1939 and continuing with 1940, service men are encountering new types of mechanism—the Fluid Drive introduced by Chrysler in 1939 and the Hydra-Matic transmission used this year by Oldsmobile.

So far the only authentic information and instructions available are to have the units serviced by the respective car dealers. The operating principles and servicing of the units are quite different.

CHRYSLER FLUID DRIVE: This was first used on some 1939 Chrysler models and is available on a greater number of 1940 Chryslers. Originally the instructions were that the unit need be serviced only every 15,000 miles as applying to 1939 models. This is now changed to 2,500 miles for both 1939 and 1940.

The capacity of the fluid unit on the Chrysler Fluid Drive is approximately 16½ pt. for 1939 and approximately 16 pt. for 1940 models. However, since the unit cannot be overfilled, the exact capacity of these units makes very little difference.

The fluid drive unit has two filler plugs diametrically opposite each other. These are located at about a 45 deg. angle off the vertical center, and the unit can only be filled to a point where the fluid starts to overflow out of the filler plug hole.

To drain the unit, the following steps are necessary:

1. Remove the clutch housing pan.
2. Rotate the fluid drive until one filler plug is at bottom center.
3. Remove the plug and drain the unit. Before replacing the plug the gasket should be carefully inspected and a new one used if necessary.
4. After replacing the plug, the clutch housing pan can be replaced and the unit filled by removing the floorboard.
5. When replacing the filler plug, its gasket should also be carefully inspected.

The level of the fluid in the unit can be inspected by removing the floorboard and then removing one of the plugs.

The fluid to be used is specially prepared by the Chrysler factory and has the correct specifications and properties to permit the fluid drive to operate properly. No other fluid should be substituted unless it has had the approval of the Chrysler factory.

After the first 500 miles of driving the car equipped with fluid drive, the unit should be inspected and the level checked. If level is correct, it should require no further attention until 3,000 miles of travel

* Copyright Chek-Chart, Inc. Reproduction forbidden.

has been completed. It should be inspected every 2,500 miles thereafter.

Loss of fluid from the fluid drive unit will be evidenced by excessive engine speeds (similar to a slipping clutch). If leakage is at either of the two filler plugs, tightening of the plugs or replacing the gaskets should correct the trouble. If leakage is from any other source in the unit, it should be referred to a Chrysler dealer, as undoubtedly the trouble is where the fluid drive unit is bolted to the crankshaft. It may be necessary to replace the gasket and tighten the bolts.

If leakage is at the seal (at the front end of the hub of the clutch driving plate), a new seal bellows assembly will be required.

Summarizing the service on the Chrysler Fluid drive, it is to be noted that inspection should be made every 2,500 miles to determine if the level has dropped due to leakage. A service station, other than a Chrysler dealer's, can do nothing about it, as special fluid is required, and if there is leakage, only a Chrysler dealer is in position to supply the gaskets that may be needed. The fluid does not require draining and replacing.

OLDSMOBILE HYDRA-MATIC DRIVE: The fluid used in this device not only serves the liquid flywheel but the automatic transmission as well. The fluid is obtainable only from the Oldsmobile factory through Oldsmobile dealers. No other fluid should be substituted without having been approved by the Oldsmobile factory. Definite specifications as to cold test, viscosity index and other important properties are highly essential. The fluid is not only subjected to moderate heat but to continuous aeration all the time the engine is running and unless the proper fluid is used, it will oxidize rapidly and become thick and heavy, and may cause trouble that would be expensive to repair. Accumulations of varnish may also result from the use of an improper fluid.

The unit should be drained and refilled with fresh fluid every 5,000 miles. This fluid lubricates all the parts of the automatic transmission.

CADILLAC-LA SALLE FRONT WHEEL BEARING LUBRICATION

On all 1940 Cadillac and La Salle models, it is necessary to remove the metal dust seals around the brake drums before the front wheels can be removed for lubrication of the bearings.

It will be recalled that Cadillac used this construction back in 1936 and 1937, but it was discontinued in 1938 and 1939.

SHIPPING CONTAINERS FOR ALL LUBRICANTS

The Draper Manufacturing Co.
Cleveland, Ohio

Attractive, Sturdy
BENETCO
Steel Drums and Pails

Build Good Will and
Stimulate Repeat Sales.

WILSON & BENNETT MFG. CO.
Jersey City - Chicago - New Orleans

GREASE & OIL PACKAGES

For the Grease & Oil
Industry

WACKMAN WELDED WARE CO.
ST. LOUIS, MO.



Recognized Headquarters
for
Authentic Automotive Information
The Chek-Chart Corporation
624 S. Michigan Ave. Chicago, Ill.

Huge Market for Petroleum Products in Farm Tractors

(Continued from page 3)

California	66,727
Colorado	18,408
Connecticut	4,910
Delaware	3,695
Florida	10,929
Georgia	13,040
Idaho	9,325
Illinois	147,200
Indiana	87,441
Iowa	135,262
Kansas	98,506
Kentucky	12,818
Louisiana	12,510
Maine	5,253
Maryland	13,162
Massachusetts	6,415
Michigan	60,136
Minnesota	91,389
Mississippi	16,478
Missouri	52,705
Montana	23,408
Nebraska	71,235
Nevada	482
New Hampshire	1,674
New Jersey	13,498
New Mexico	4,994
New York	63,046
North Carolina	21,452
North Dakota	52,098
Ohio	87,374
Oklahoma	47,055
Oregon	14,127
Pennsylvania	54,991
Rhode Island	1,024
South Carolina	6,676
South Dakota	46,103
Tennessee	13,603
Texas	108,037
Utah	2,840
Vermont	3,700
Virginia	14,041
Washington	13,660
West Virginia	4,108
Wisconsin	80,341
Wyoming	5,800



DOPP
positively-
scrapped
**GREASE
KETTLES**
and
**PRESSURE
MIXERS**

SOWERS MANUFACTURING CO.
1295 Niagara St. Buffalo, N. Y.

LITHOGRAPHED GREASE and OIL PACKAGES

Steel Pails...Grease Cans...
Kerosene Cans...and Lubri-
cating Oil Containers...from
one dependable source.

OWENS-ILLINOIS CAN CO.
TOLEDO • OHIO

CONTAINERS

Quality Packages for
Your Products

National Enameling & Stamping Co.
Milwaukee Granite City

Use Metasap Aluminum Stearate
Bases for Clear, Transparent,
Water Insoluble Greases.

Send for free copy
"Meeting Modern Lubrication Demands"



**METASAP CHEMICAL
COMPANY**
HARRISON, NEW JERSEY

ASSOCIATE MEMBERS

DRAPER MANUFACTURING CO., Cleveland, O.
WACKMAN WELDED WARE COMPANY, St. Louis, Mo.
CHEK-CHART CORPORATION, Chicago, Ill.
METASAP CHEMICAL CO., Harrison, N. J.

OWENS-ILLINOIS CAN CO., Pittsburgh, Pa.
NATIONAL ENAMELING & STAMPING CO., Milwaukee, Wis.
WILSON & BENNETT MFG. CO., Chicago—Jersey City
SOWERS MANUFACTURING CO., Buffalo, N. Y.



LUBRICATE FOR SAFETY EVERY 1000 MILES